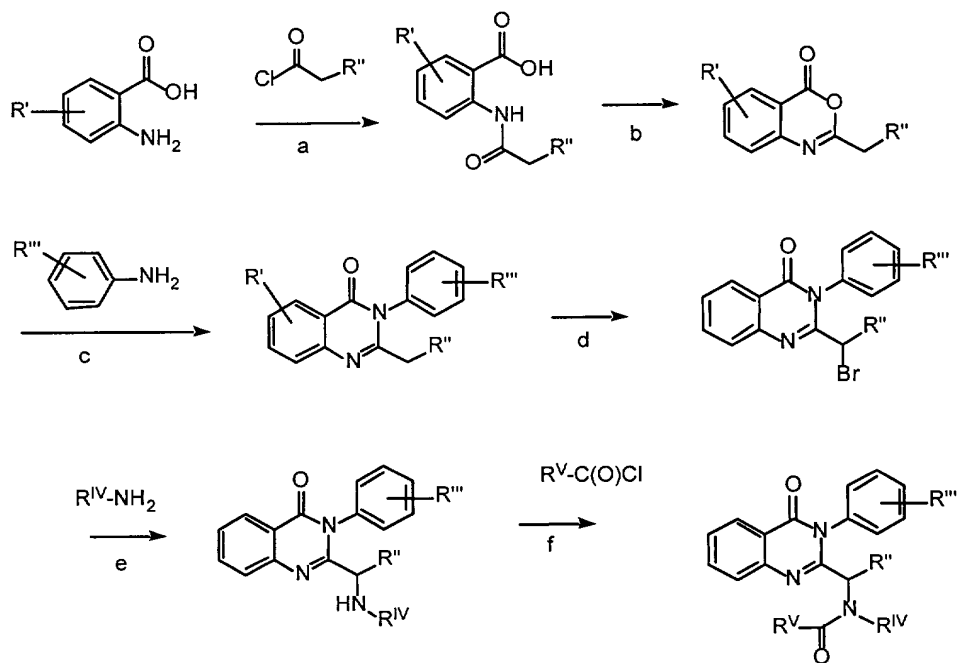
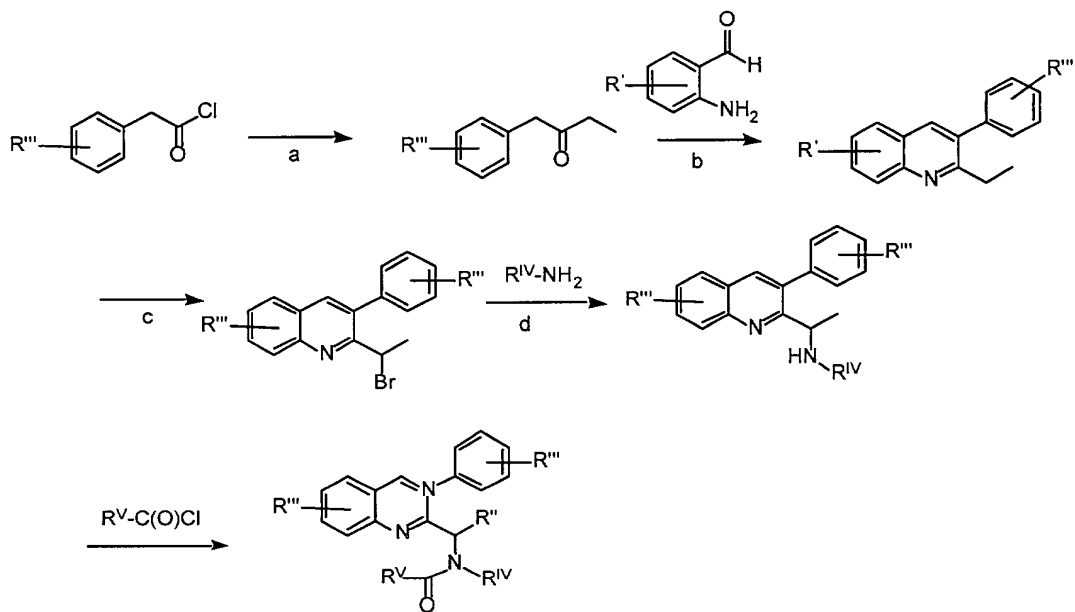


FIG. 1



(a) DMF, RT (b)  $AcO_2$ ,  $118-130^\circ C$  (c) i.  $CHCl_3$ ,  $80^\circ C$ ; ii. cat. NaOH, ethylene glycol,  $130^\circ C$   
(d)  $Br_2$ , NaOAc, HOAc,  $40^\circ C$  (e) EtOH,  $80^\circ C$  (f)  $NEt_3$ , cat. DMAP, 1,4-dioxane

FIG. 2



a  $Et_2Zn$ ,  $AlCl_3$ ,  $CH_2Cl_2$ ,  $-30^\circ C$  to rt. b  $R'$ -substituted o-aminobenzaldehyde, 33% KOH, EtOH. c  $Br_2$ , NaOAc, HOAc. d EtOH,  $80^\circ C$ .

FIG. 3

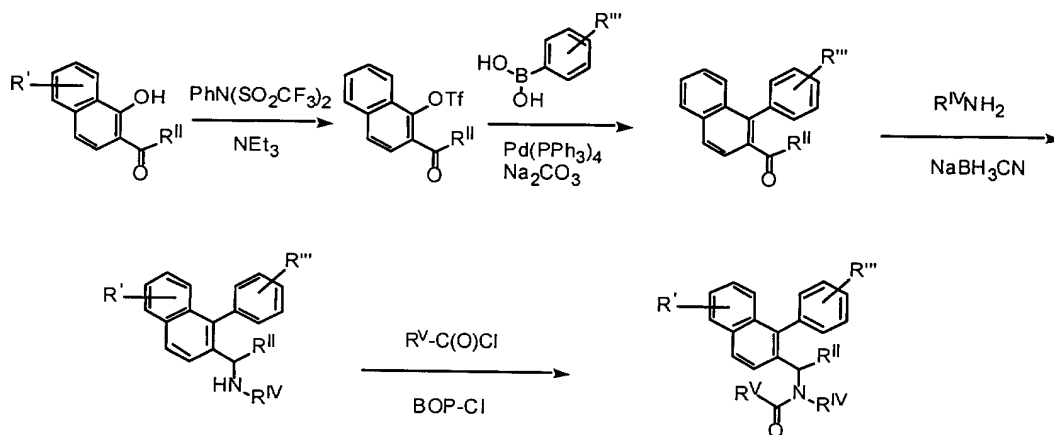
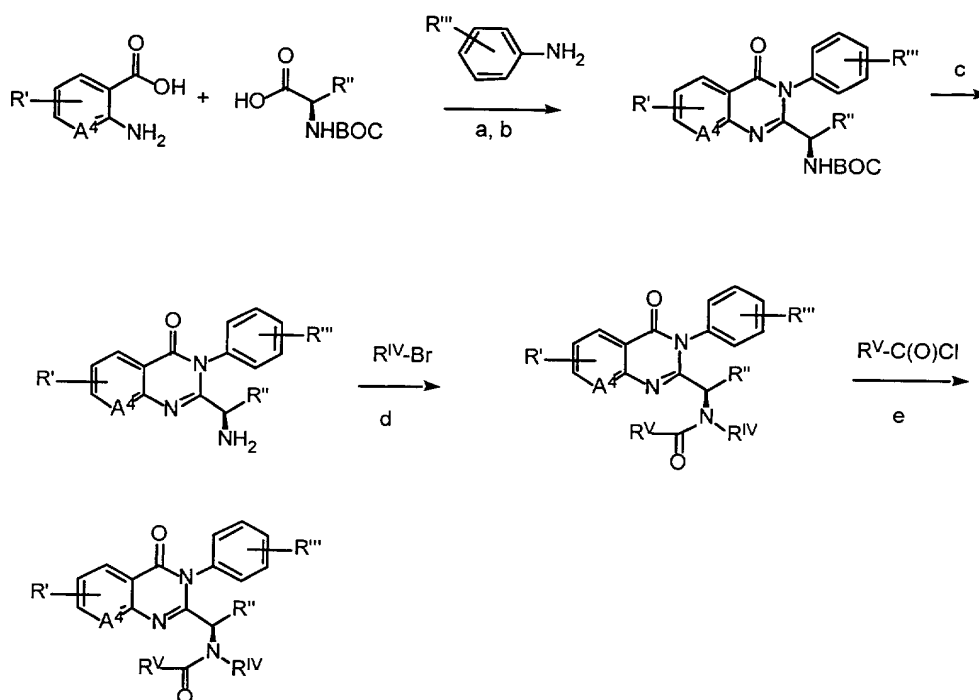


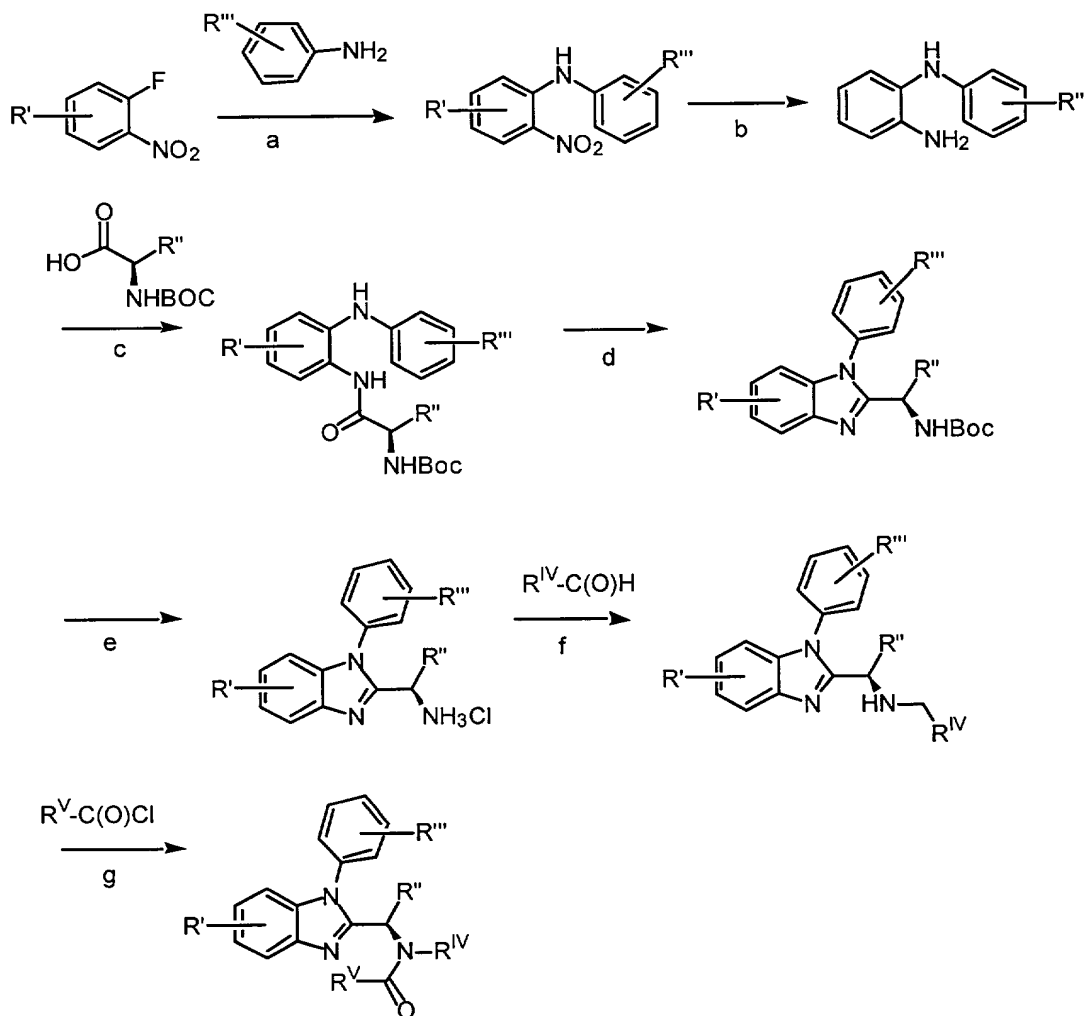
FIG. 4



a.  $P(OPh)_3$ , pyridine, 55 °C, 14 h; b.  $R'''$  substituted aniline, 55 °C, 1 h;  
c. TMSI, MeCN, 25 °C, 1 h; d. KI,  $K_2CO_3$ , DMPU; e. EDC, HOBT,  
 $CH_2Cl_2$ .  
 $A^4=C$  or N

FIG. 5

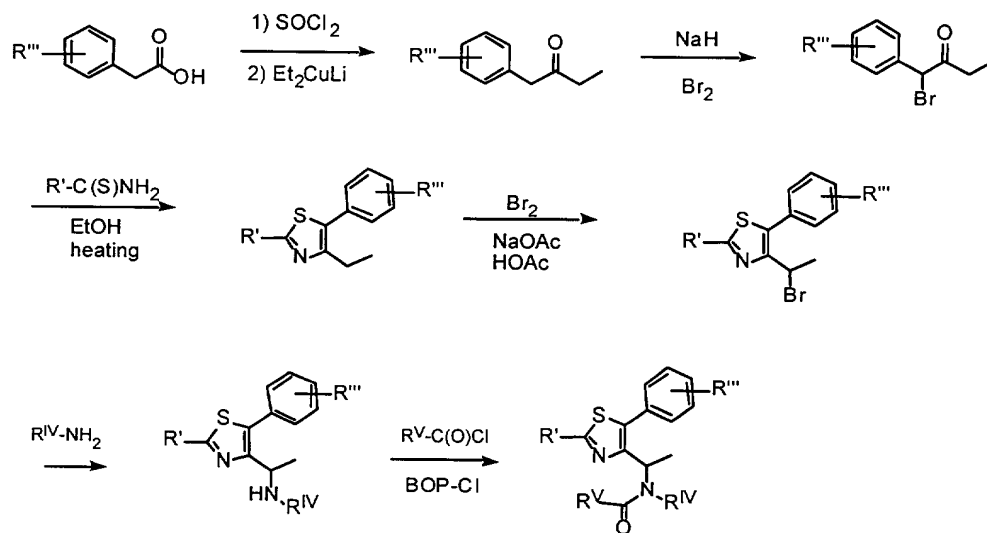
# Scheme for the generic synthesis of benzimidazoles



a K<sub>2</sub>CO<sub>3</sub>, DMF, 125°C, 16h. b H<sub>2</sub>, Pd/C, rt. c D- Boc-Ala-OH, EDC, HOBT, NMM, DMF.  
d HOAc, 90°C. e 4M HCl in dioxane, EtOAc, rt. f NaBH<sub>3</sub>CN, MeOH, rt. g Bop-Cl, Et<sub>3</sub>N, THF, rt.

FIG. 6

Part A



Part B

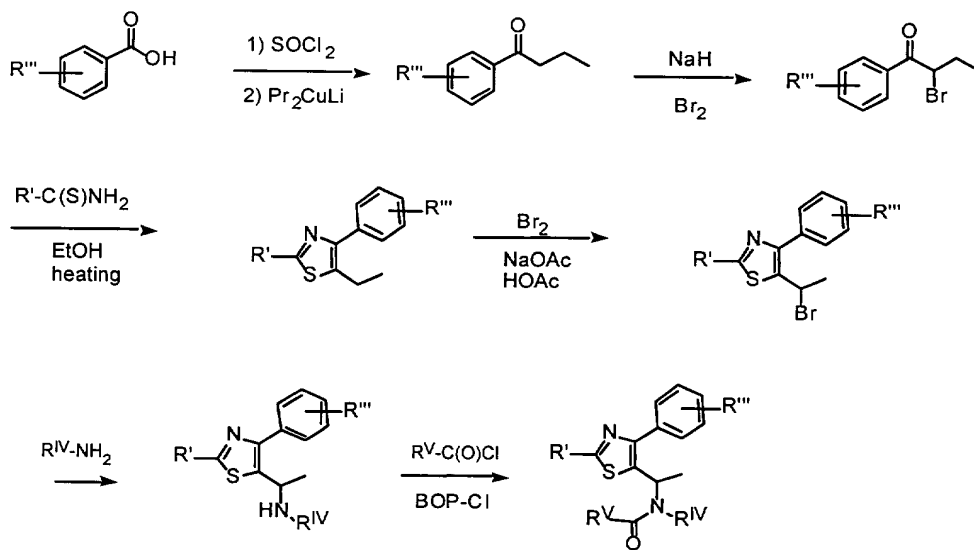


FIG. 7

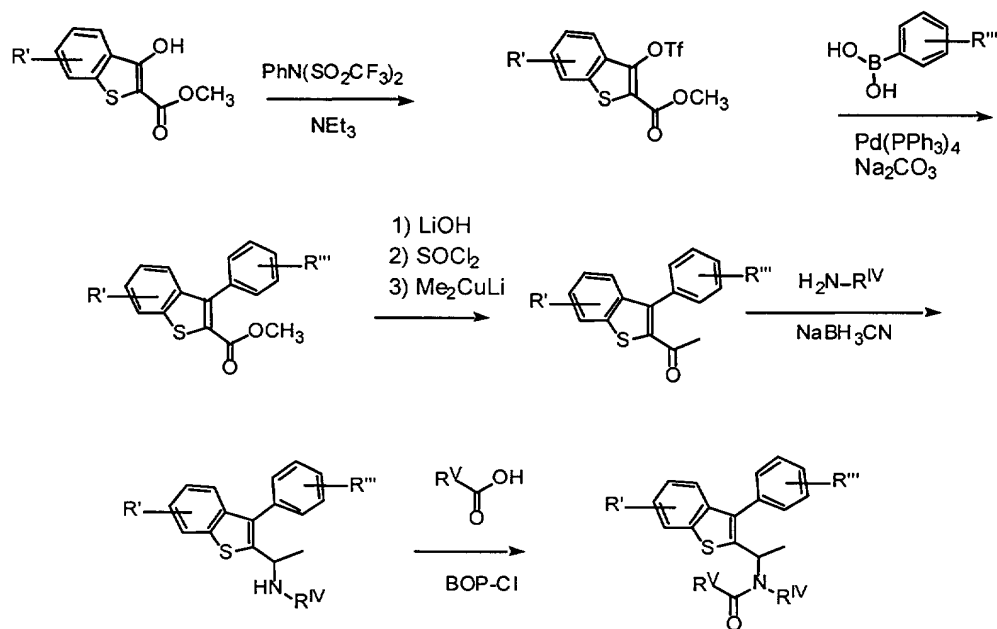


FIG. 8

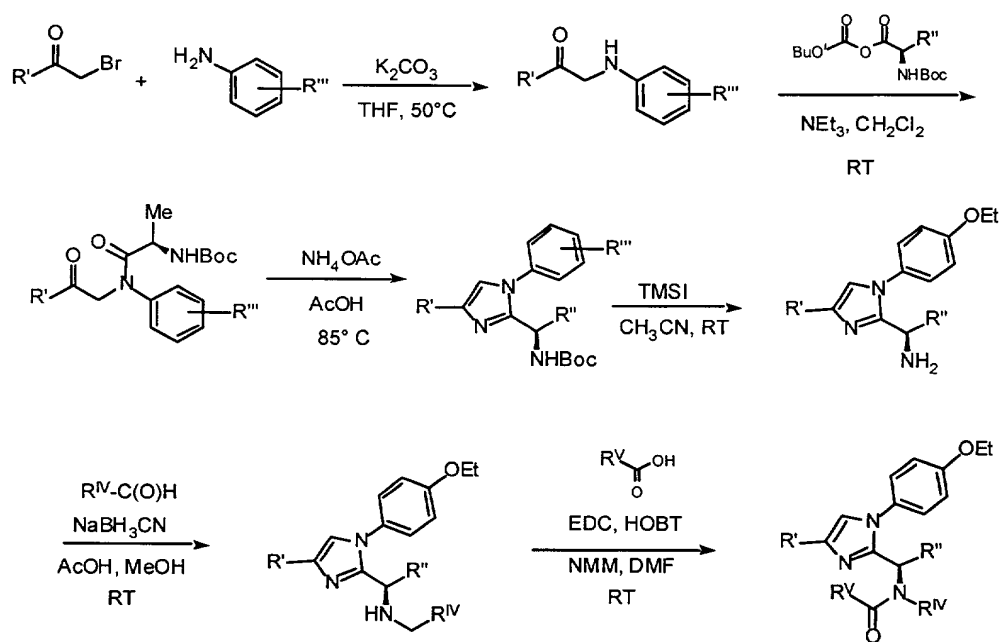


FIG. 9

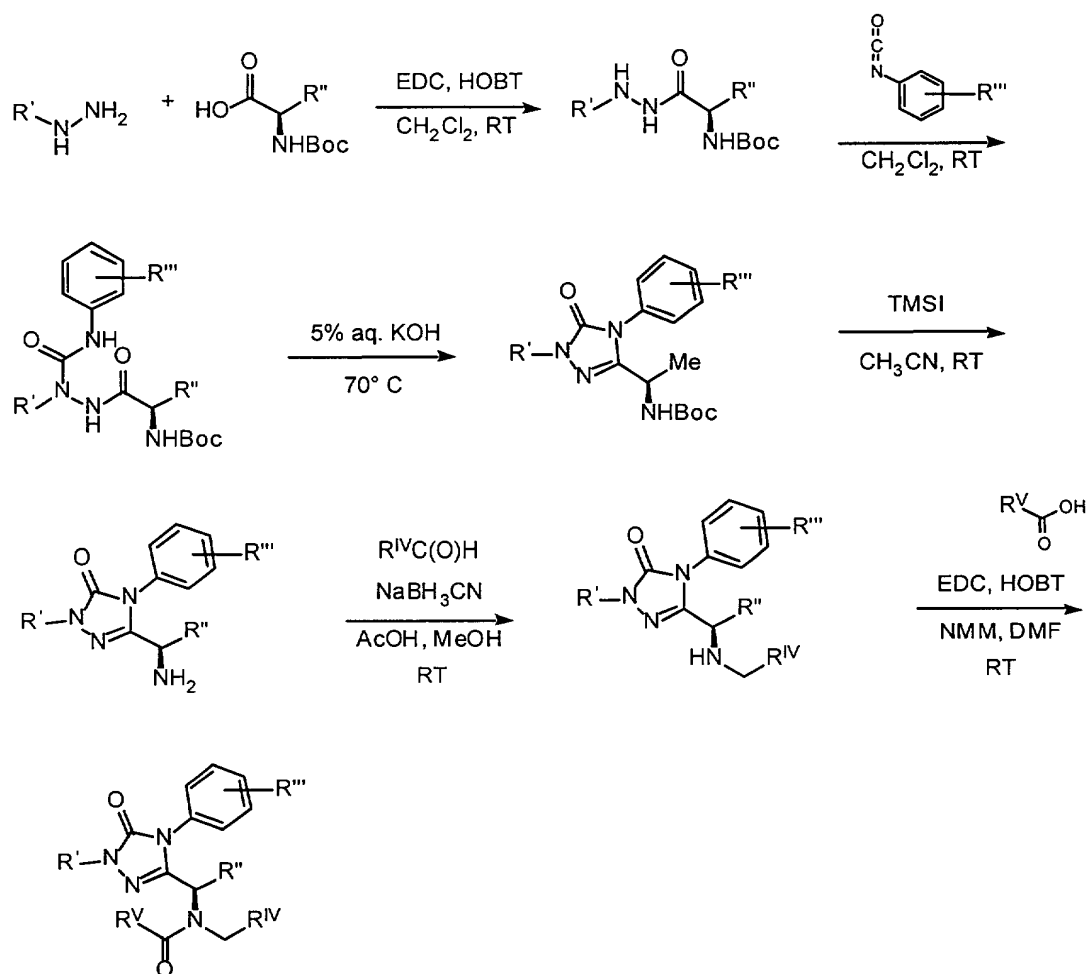
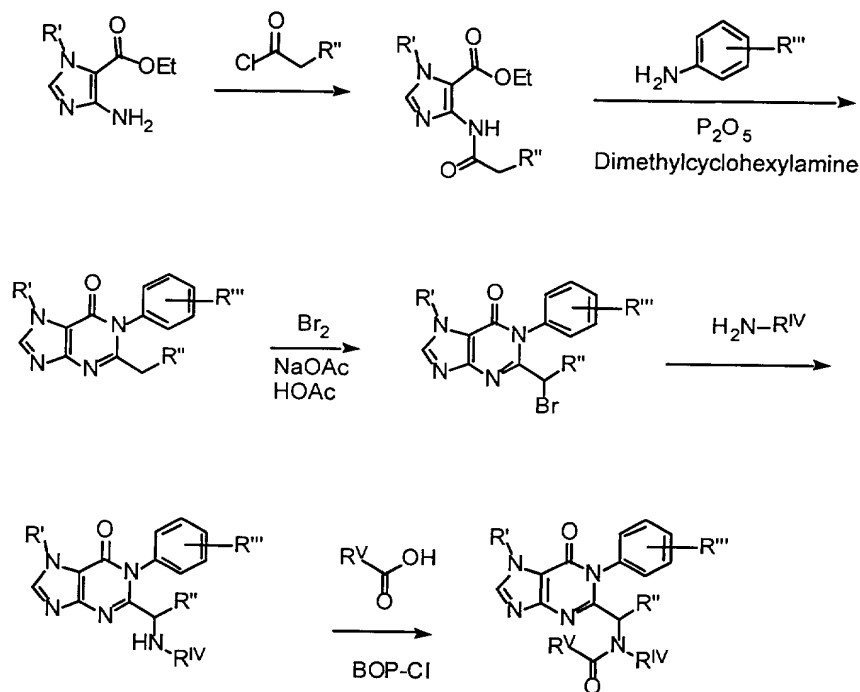


FIG. 10



Ref. Nielsen, F.E.; Pedersen, E.B. Tetrahedron, 1982, 38,

FIG. 11

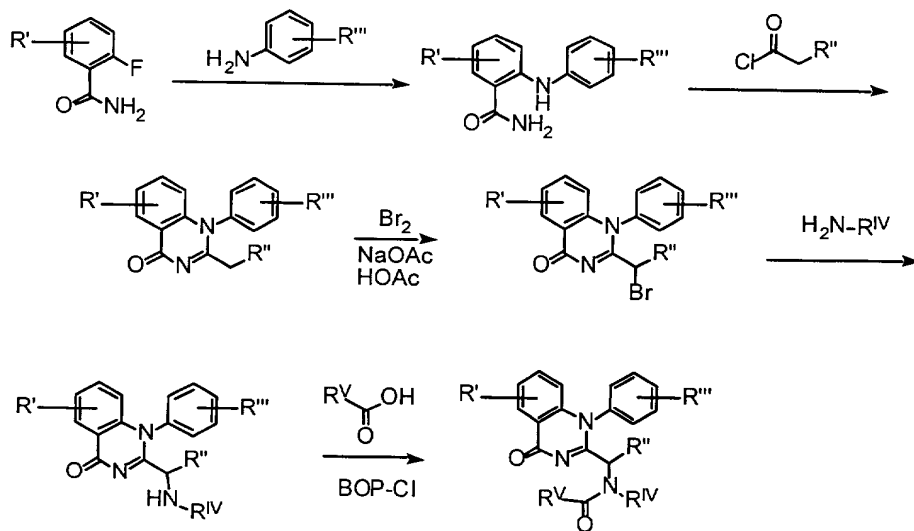


FIG. 12

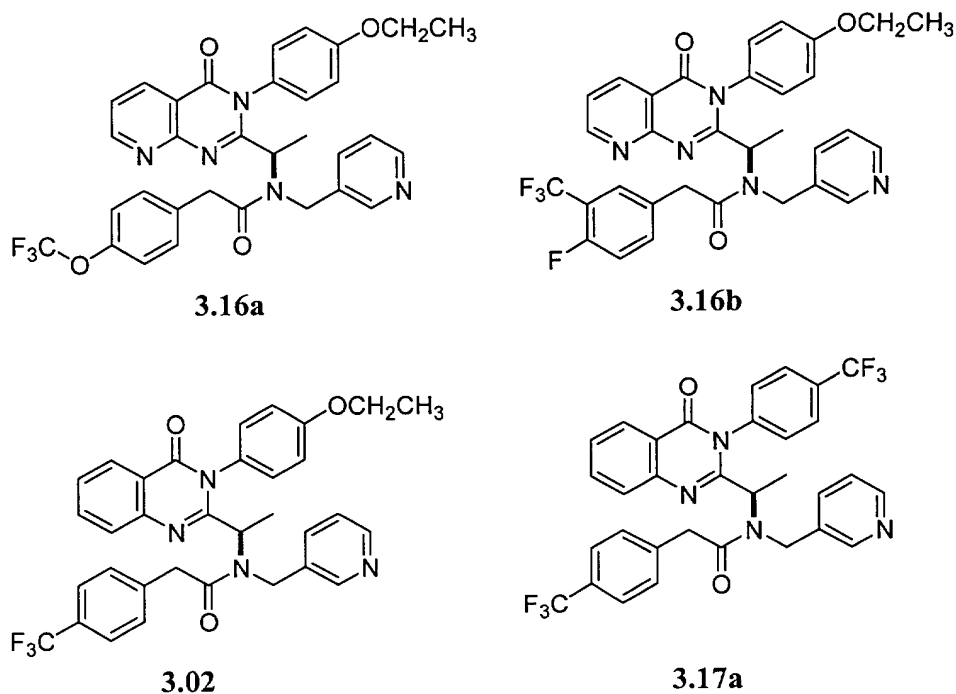


FIG. 13

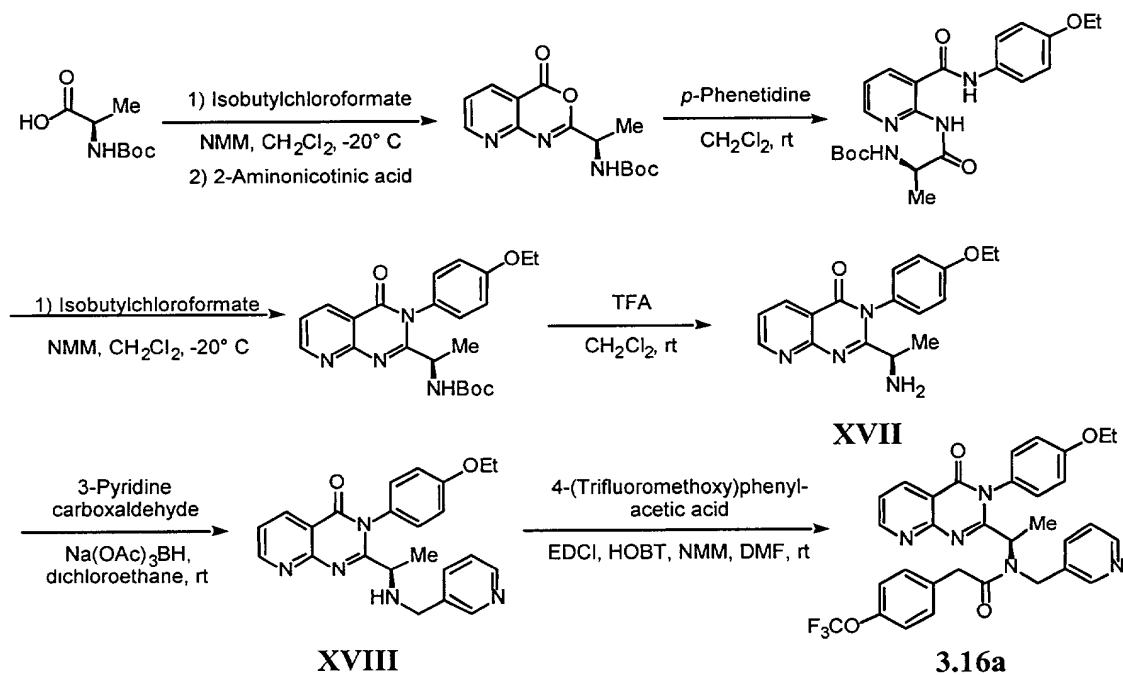
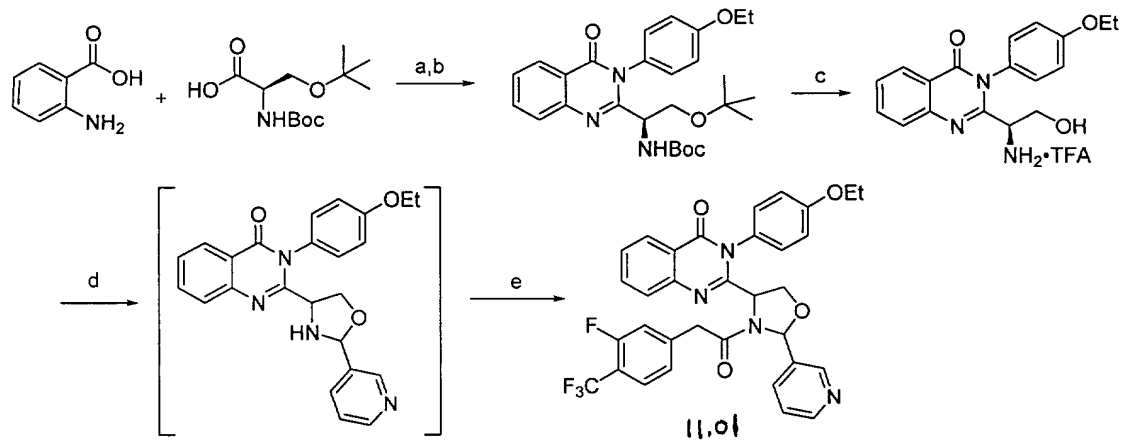


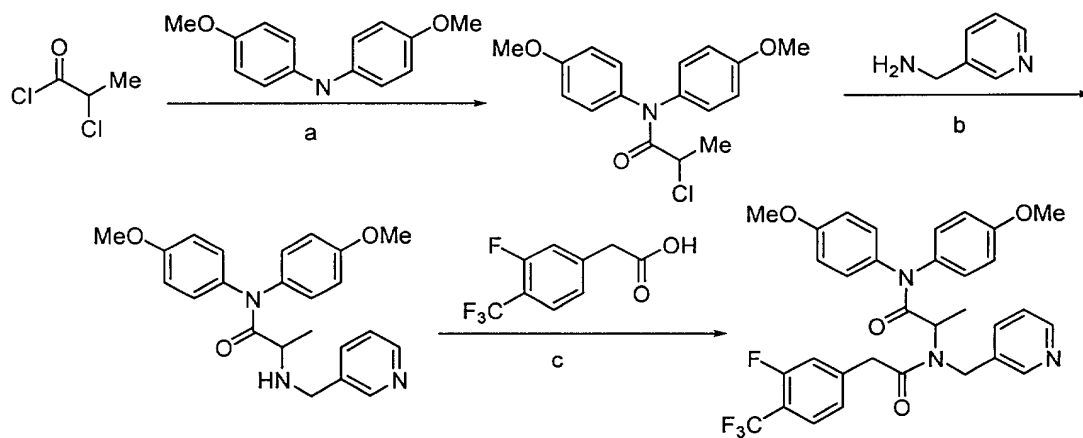


FIG. 14



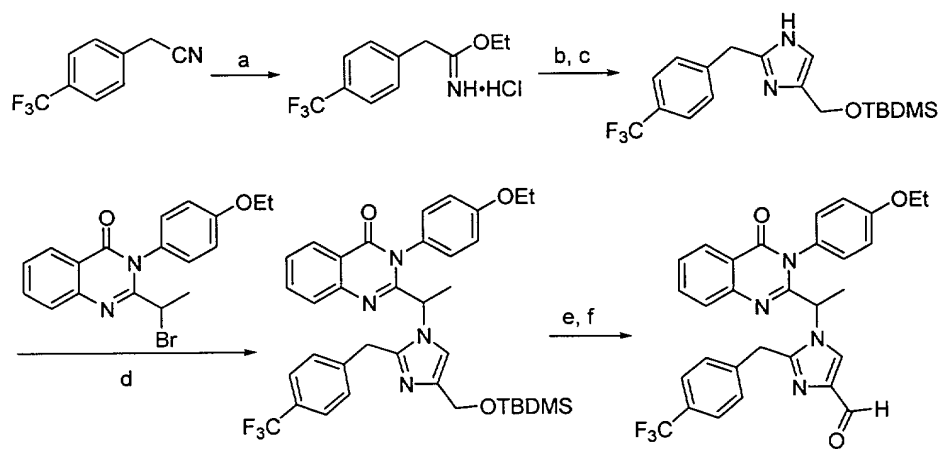
a.  $P(OPh)_3$ , pyridine, 80°C; b. p-Ethoxyaniline, 50°C; c. TFA, DCM; d. 3-Pyridylcarboxaldehyde,  $NEt_3$ ,  $MgSO_4$ , DCM; e. 3-Fluoro-4-trifluoromethylphenylacetic acid, BOP-Cl.

FIG. 15



a.  $NEt_3$ , DCM; b. EtOH, 90°C; c. BOP-Cl, DMF.

FIG. 16



a. HCl (gas), EtOH; b. NH<sub>3</sub>, EtOH; c. TBDMSCl, Imidazole, DMF; d. K<sub>2</sub>CO<sub>3</sub>, DMF, 50°C; e. HCl (conc.), EtOH; f. MnO<sub>2</sub>, DCM.

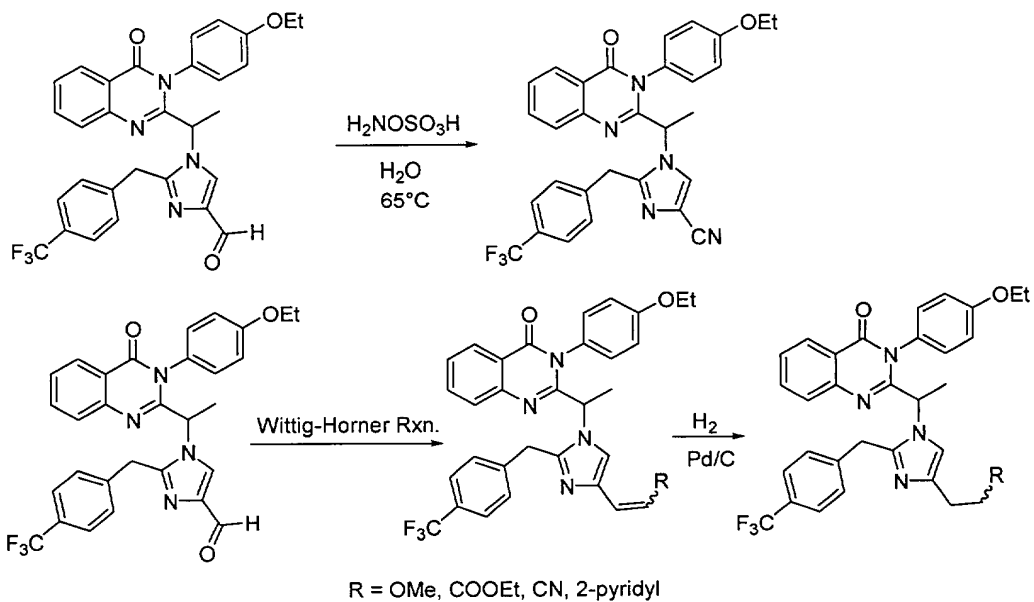
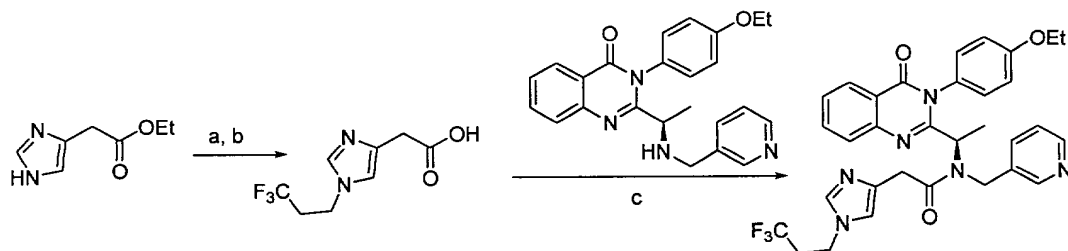
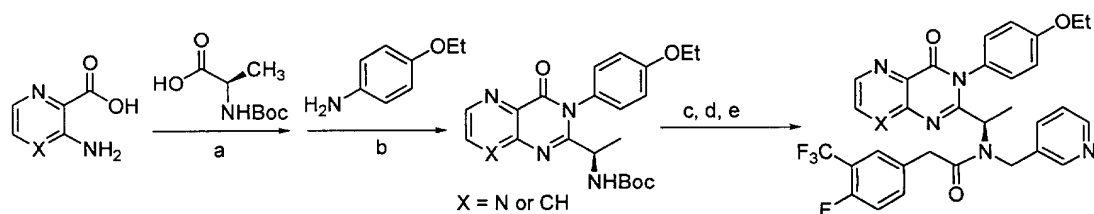


FIG. 17



a. CF<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>I, K<sub>2</sub>CO<sub>3</sub>, DMF, 50°C; b. LiOH, H<sub>2</sub>O; c. BOP-Cl, NEt<sub>3</sub>.

**FIG. 18**



a.  $i\text{BuOCOC}\text{Cl}$ ,  $\text{NEt}_3$ ,  $-20^\circ\text{C}$ ; b.  $i\text{BuOCOC}\text{Cl}$ ,  $\text{NEt}_3$ ,  $0^\circ\text{C}$ ; c. TFA, DCM; d. 3-Pyridylcarboxaldehyde,  $\text{NaBH}(\text{OAc})_3$ ; e. 4-Fluoro-3-trifluoromethylphenylacetic acid, BOP-Cl,  $\text{NEt}_3$ .

FIGURE 19

Table

CXCR3 binding assay IC50≥10μM=X; 10μM>IC50≥1μM=XX; IC50<1μM=XXX

Compound	IC50
1.01	XX
1.02	XXX
1.03	XXX
1.04	XX
1.05	XXX
1.06	X
1.07	XXX
1.08	XXX
1.09	X
1.1	XXX
1.11	X
1.12	XX
1.13	XX
1.14	XX
1.15	XX
1.16	XXX
1.17	XXX
1.18	XXX
1.19	XXX
1.2	XX
1.21	XXX
1.22	XXX
1.23	XXX
1.24	XXX
1.25	XXX
1.26	XXX
1.27	XXX
1.28	XX
1.29	XXX
1.3	XXX
1.31	XX
1.32	XXX
1.33	XX
1.34	XXX
1.35	XX
1.36	XX
1.37	XX
1.38	XX
1.39	XXX
1.4	XX
1.42	XX
1.43	XXX
1.44	X
1.45	X

Compound	IC50
1.47	XX
1.48	XXX
1.49	XXX
1.5	XX
1.51	X
1.53	XXX
1.54	XXX
1.55	X
2.01	XXX
2.02	XXX
2.03	XX
2.04	XX
2.05	XXX
2.06	XXX
2.07	XXX
2.08	XXX
2.09	XXX
2.1	XXX
2.11	XXX
2.12	XXX
3.01	XXX
3.02	XXX
3.03	XXX
3.04	XXX
3.05	XXX
3.06	XXX
3.07	XXX
3.08	XXX
3.09	XXX
3.1	XXX
3.11	XXX
3.12	XXX
3.13	XXX
3.14	XXX
3.15	XX
3.16	X

Compound	IC50
4.01	XXX
4.03	X
5.01	X
6.01	XXX
6.02	XX
7.01	XX
8.01	X
9.01	XXX
9.02	XXX
9.03	XXX
9.04	XXX
9.05	XXX
9.06	XXX
9.07	XXX
9.08	XXX
9.09	X
9.10	
10.01	XXX
10.02	XX
10.03	XXX
10.04	XXX
10.05	XXX